

REMARKS

Claims 1-17 are all the claims pending in the application. New claims 11-17 have been added to further define the invention. Reconsideration and allowance of all the claims are respectfully requested in view of the following remarks.

Election / Restriction

The Examiner reiterates the restriction previously made telephonically, and requests that Applicant confirm election of Group II, claims 2-10. Applicant hereby confirms the election of Group II.

Claim Rejections - 35 U.S.C. § 112

- The Examiner rejected claims 2-7 under §112, 1st paragraph, as containing subject matter not described in the specification so as to reasonably convey that the inventors had possession of the claimed invention. Specifically, the Examiner asserts that the phrase “alternately arranging” is not clear. The Examiner requests clarification. Applicant respectfully traverses this rejection because the phrase “alternately arranging” is, indeed, clear as written.

Webster’s Ninth New Collegiate Dictionary (1986) defines the verb alternate as “to perform by turns or in succession. Further, Webster’s sets forth that the adverb form of this term is “alternately”. Accordingly, “alternately arranging” should be given its plain and ordinary meaning of arranging by turns or in succession. Indeed, this is how the term is used throughout the specification.

For example, as shown in Figs. 2-6, one embodiment of the invention comprises simultaneously molding two substrates 202. As shown in Figs. 2-4, stampers 110 a, b cooperate with rings 122 a, b to form two mold cavities. Molten resin 84 from hopper 86 is simultaneously fed through nozzles 88 a, b to simultaneously fill the mold cavities and form two substrates 202. The two substrates 202 are then picked up by arm 18 using chuck mechanisms 152 a, b. As shown in Figs. 6 and 8, the arm takes the two simultaneously molded substrates 202 and moves them to a cooling apparatus 14. In the cooling apparatus 14, the arm alternately supplies the

substrates 202 to a feed mechanism which may be, for example, a feed screw mechanism 250, a rotary table 300, a cylinder 306, or a heptagonal prism 310. See Figs. 8, 9, and 12-14. This injection molding process is then repeated to mold two substrates 202 simultaneously in successive cycles.¹

Because the arm 18 moves two substrates 202 at a time, they are “alternately arranged” on the feed mechanism in the cooling apparatus 14. See for example: page 22, lines 6-20 (the substrates are “alternately supplied to and vertically held in the screw grooves 172 ... of the feed screw mechanism 250” and “substrates 202 are successively supplied from the arm mechanism 18 to the feed screw mechanism 250.”); page 24, lines 2-19 (“two simultaneously injection-molded substrates 202 are alternately placed with their surfaces oriented vertically, and arranged at a pitch ...”); page 38, lines 23 - page 39, line 2 (two simultaneously molded substrates 202 are alternately placed flatwise on a table surface 302 of a rotary table 300.”); page 39, lines 15-19 (“Two simultaneously molded substrates 202 are alternately placed vertically in the cylinder 306.”); page 40, lines 1-8 (“Two simultaneously molded substrates 202 are alternately attracted to outer facets of the heptagonal prism 310 under vacuum.”).

In light of the above, the specification does, indeed, convey to one of ordinary skill in the art that Applicant was in possession of the claimed subject matter—“alternately arranging said two substrates”—at the time the application was filed.

- The Examiner rejected claims 2-7 under §112, 2nd paragraph, as indefinite. Again, the Examiner asserts that the phrase “alternately arranging” is vague because it would encompass a number of arrangements and procedures. Although the Examiner is correct in that the phrase would encompass a number of arrangements and procedures, such does not make the phrase indefinite; it is merely broad. And breadth of a claim is not to be equated with indefiniteness.² Thus, the definition of the method in such broad terms does not make the claims indefinite.

¹ Specification at page 19, lines 18-19.

² *In re Miller*, 441 F.2d 689, 169 USPQ 597 (CCPA 1971).

Claim Rejections - 35 U.S.C. § 103

- The Examiner rejected claims 2-7 under §103(a) as being unpatentable over the admitted prior art (hereinafter the APA) as set forth at page 1 and page 2, line 17 - page 3, of the present specification. Applicant respectfully traverses this rejection because the APA fails to teach or suggest every element as set forth in Applicant's claims.

Claim 2 sets forth a method of manufacturing an information recording medium having a substrate, comprising simultaneously injection-molding two substrates, alternately arranging said two substrates on one feed mechanism, and cooling said two substrates.

For example, as noted above with respect to the rejection under §112, two simultaneously molded substrates 202 are taken by arm 18 and are alternately arranged on one feed mechanism 250, 300, 306, or 310. Because the substrates 202 are alternately arranged on one feed mechanism, they are cooled at a constant rate and, thus, are stable and free from mechanical fluctuations such as warpage and swaying. The substrates thus produced are effective in improving the characteristics of information recording mediums.³

In contrast to that set forth in claim 2, the APA discloses cooling the substrates by placing them flatwise on respective rotary tables, magazines, or on independent lines.⁴ Thus, the substrates of the APA are not alternately arranged on one feed mechanism, as set forth in claim 2. Notwithstanding this fact, the Examiner makes bald assertions that it would have been obvious to alternately arrange the disks of the APA on one feed device.

Specifically, the Examiner asserts that it would have been obvious to one of ordinary skill in the art "to remove injection molded disks one at a time and arrange them thusly for cooling within the same device dependent on mold take-out apparatus available and to maintain a consistent heat history for the disks". However, there is no teaching or suggestion in the prior art that maintaining a consistent heat history for the disks would be desirable. Instead, it is

³ Specification at page 24, lines 2-19.

⁴ Specification at page 2, lines 17-26.

Applicant who discloses that by alternately arranging two simultaneously molded substrates on one feed mechanism in a cooling apparatus, the substrates can be cooled without the development of a temperature difference between inner and outer circumferential regions. Further, it is Applicant who discloses that the substrates thusly cooled are “stable and free from mechanical fluctuations such as warpage and swaying, thereby producing improved characteristics of the information recording mediums.”⁵ Therefore, the Examiner is using Applicant’s own disclosure against him. This he cannot do, because the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant’s disclosure.⁶

For at least the above reasons, claim 2 is not rendered obvious by the APA. Likewise, dependent claims 3-7 are not rendered obvious by the APA.

- The Examiner rejected claims 8-10 under §103(a) as being unpatentable over the APA in view of US Patent 6,132,545 to Motokawa et al. (hereinafter Motokawa). Applicant respectfully traverses rejection because Motokawa teaches away from the combination suggested by the Examiner.

Motokawa discloses that two discs both produced in an identical injection molding machine using different stampers are bonded together so as to form a two-disc laminated optical disc.⁷ But Motokawa further discloses that such a process has the problem that the discs so produced will have a difference in moisture content and, thus, when bonded are apt to cause warpage in the final product.⁸ And a warped disk is defective. Thus, Motokawa teaches that

⁵ Specification at page 24, lines 2-19.

⁶ *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See also *Uniroyal, Inc. v. Rudcan-Wiley, Corp.*, 837 F.2d 1044, 5 USPQ2d 1434 (Fed. Cir. 1988).

⁷ Motokawa at col. 1, lines 48-53.

⁸ Motokawa at col. 1, line 54 - col. 2, line 5.

such a process should not be used. Accordingly, Motokawa's remaining disclosure teaches how to avoid this problem.

Despite Motokawa's disclosure of the problem with simultaneously injection molding two discs and bonding them together, the Examiner asserts that "the fact that it has been done is evidence enough for obviousness, which only requires a reasonable expectation of success." The Examiner is wrong. In order to establish *prima facie* obviousness, also: the claimed invention must be considered as a whole; the references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination, and the references must be viewed without the benefit of impermissible hindsight afforded by the claimed invention. See MPEP § 2141, page 2100-114, section entitled "BASIC CONSIDERATIONS WHICH APPLY TO OBVIOUSNESS REJECTIONS".

Accordingly, because the Examiner looks at only one of the basic considerations, he reaches the wrong conclusion. That is, the Examiner has not properly considered Motokawa's disclosure that teaches away from simultaneously molding two discs and then bonding them together. Instead, one of ordinary skill in the art—looking at the teachings of Motokawa as a whole—would not have simultaneously molded two discs and bonded them together because by doing so, the final product would be subject to warpage. That is, Motokawa teaches away from the Examiner's suggested combination. And it is improper to combine references where the references teach away from their combination.²

For at least the above reasons, claim 8 is not rendered obvious by the APA and Motokawa. Likewise, dependent claims 9 and 10 are not rendered obvious by these references.

Conclusion


New claims 11-17 have been added to further define the invention. Claims 11-17 depend from claim 2 and, therefore, should be allowable at least by virtue of their dependency. Further, dependent claims 11-19 further define the process as set forth on pages 24 and 27-28.

² *In re Grasselli*, 713 F.2d 731, 218 USPQ 769, 779 (Fed. Cir. 1983).

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,


Jeffrey A. Schmidt
Registration No. 41,574

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE



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PATENT TRADEMARK OFFICE

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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claim 2 has been amended as follows:

2. (Amended) A method of manufacturing an information recording medium having a substrate produced by injection molding, and a dye recording layer disposed on said substrate for recording information therein, comprising [the steps of]:

simultaneously injection-molding two substrates;

alternately arranging said two substrates on one feed mechanism; and

cooling said two substrates.

Claims 11-17 have been added as new claims.